

Experiment 3

3. Design a lexical Analyzer to validate operators to recognize the operators +,-,*,/ using regular Arithmetic operators .

Program:

```
#include <stdio.h>
#include <stdbool.h>

int main() {
    char input[100];

    printf("Enter an arithmetic expression: ");
    scanf("%s", input);
    int i = 0;

    while (input[i] != '\0') {

        if (input[i] == ' ' || input[i] == '\t' || input[i] == '\n') {
            i++;
            continue;
        }

        bool isValidOperator = false;

        if (input[i] == '+') {
            isValidOperator = true;
        } else if (input[i] == '-') {
            isValidOperator = true;
        } else if (input[i] == '*') {
```

```

        isValidOperator = true;
    } else if (input[i] == '/') {
        isValidOperator = true;
    } else if (input[i] == '=') {
        isValidOperator = true;
    }

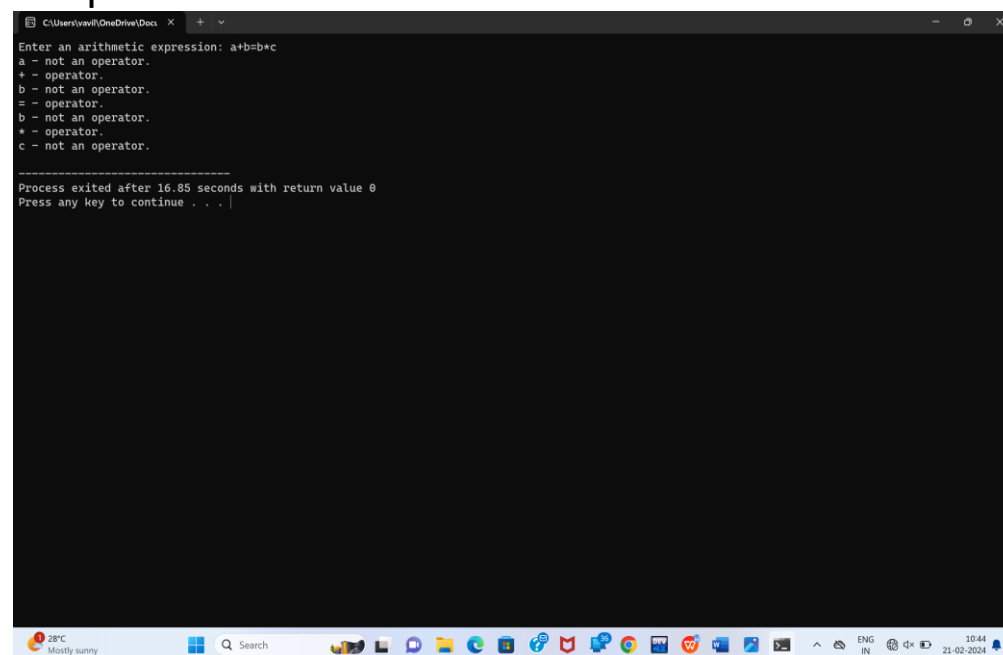
    if (isValidOperator) {
        printf("%c - operator.\n", input[i]);
    } else {
        printf("%c - not an operator.\n", input[i]);
    }

    i++;
}

return 0;
}

```

Output:



```

C:\Users\user\OneDrive\Doc... x + v
Enter an arithmetic expression: a+b=c
a - not an operator.
+ - operator.
b - not an operator.
= - operator.
b - not an operator.
* - operator.
c - not an operator.

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Process exited after 16.85 seconds with return value 0
Press any key to continue . . .

```

